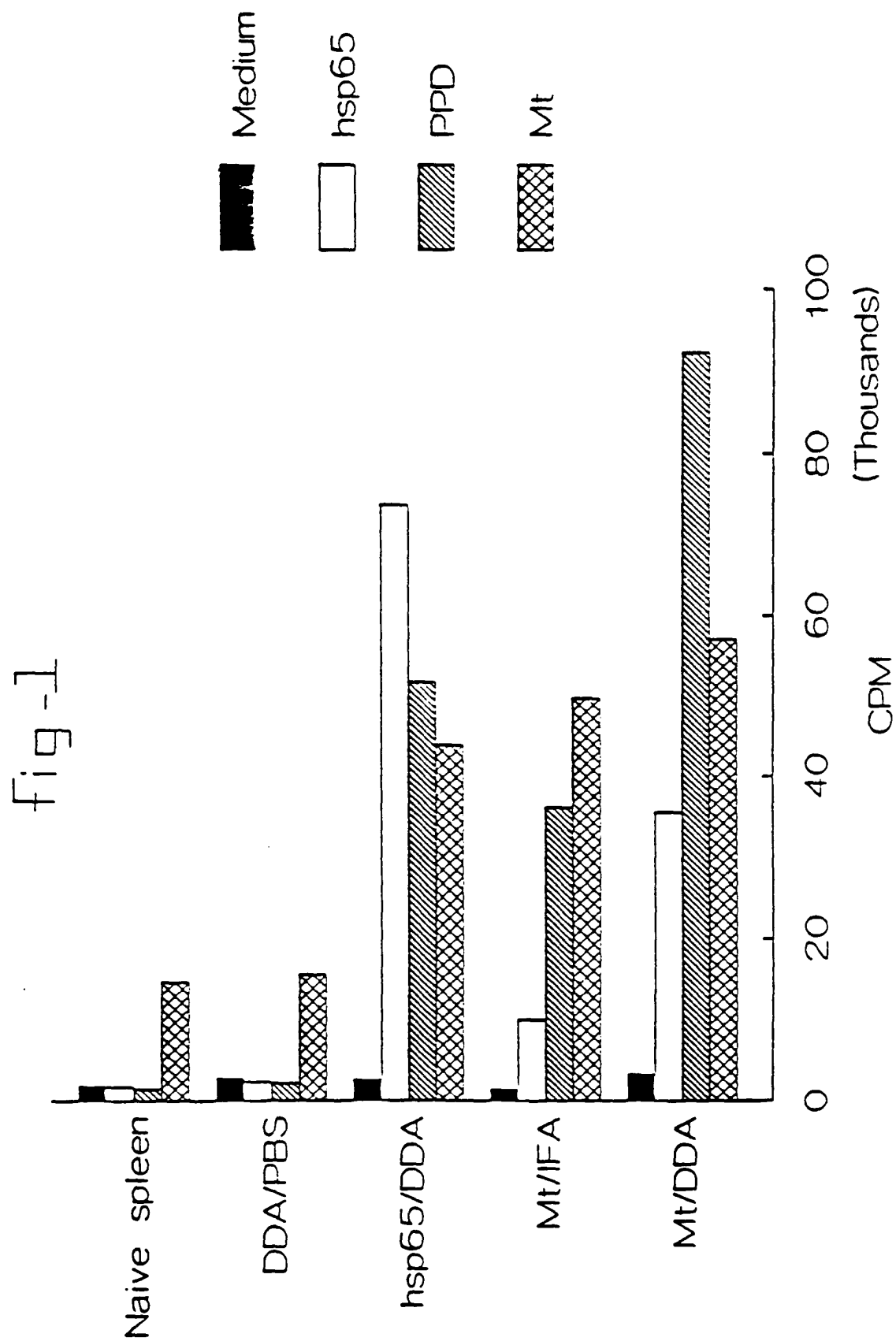


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fig-2

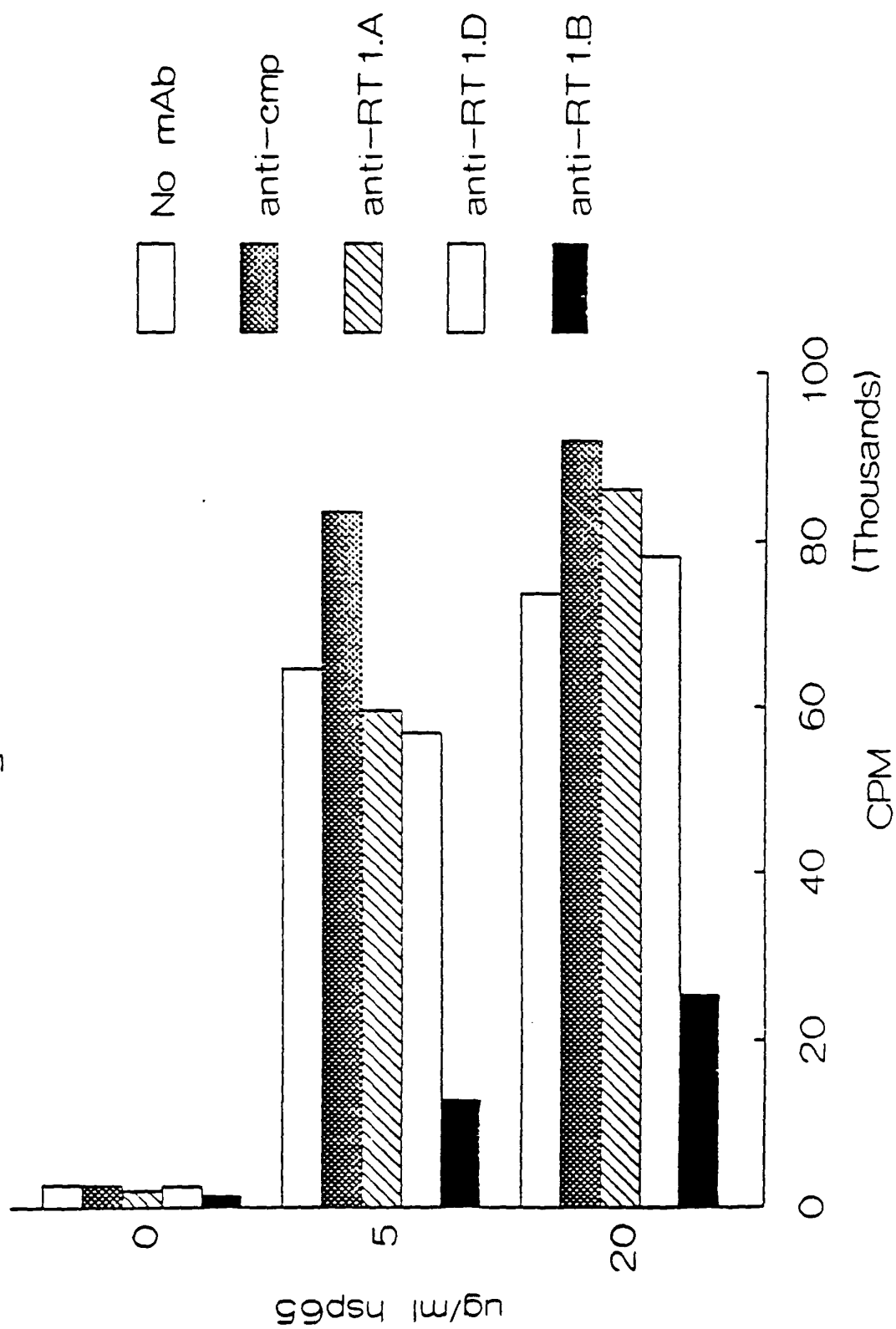
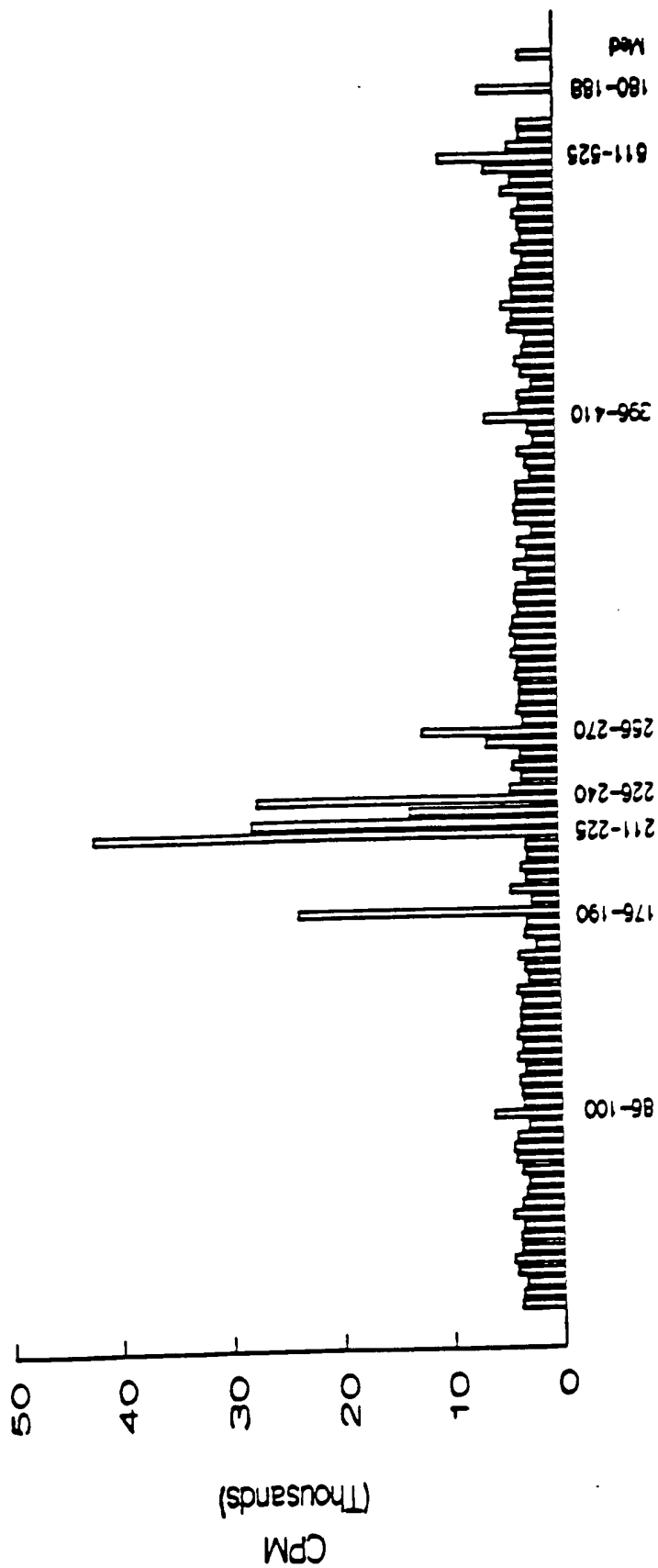
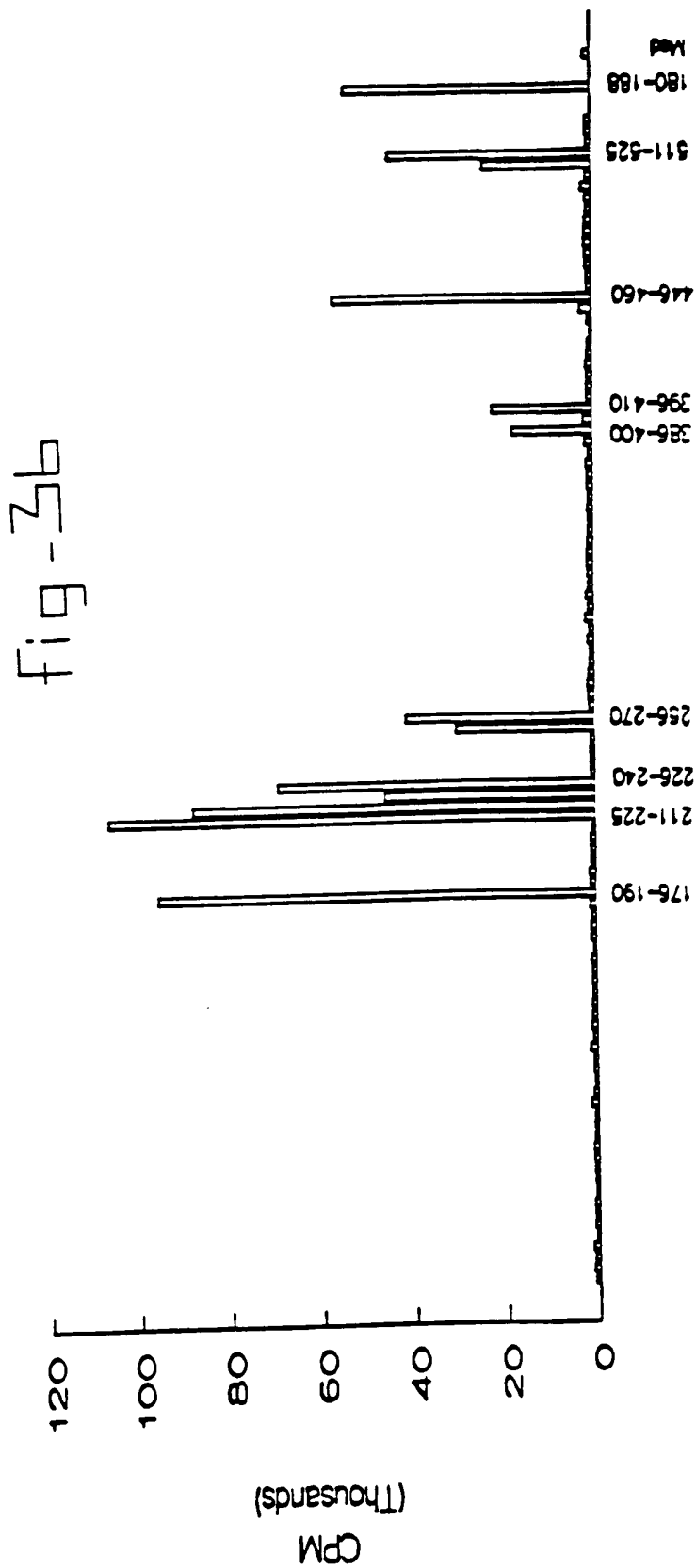


fig-3a





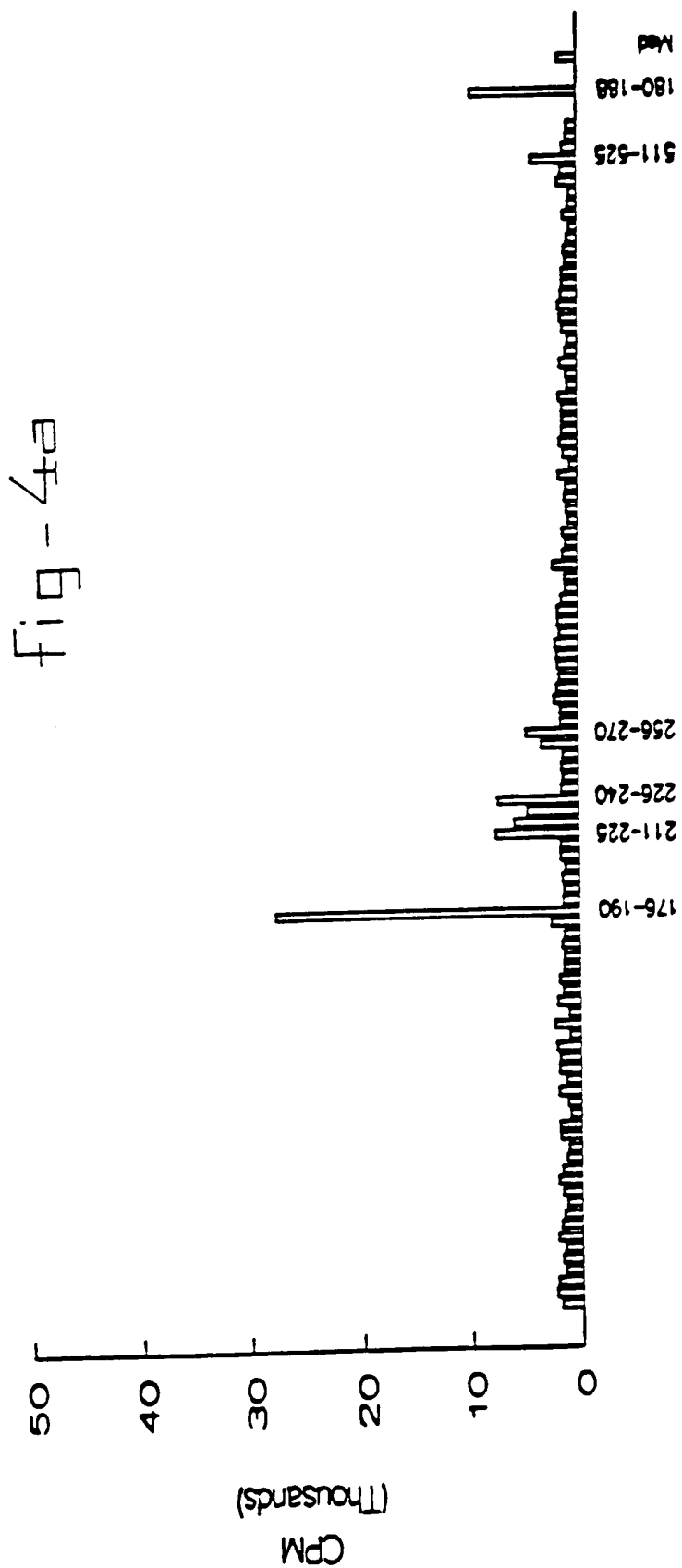


fig-4b

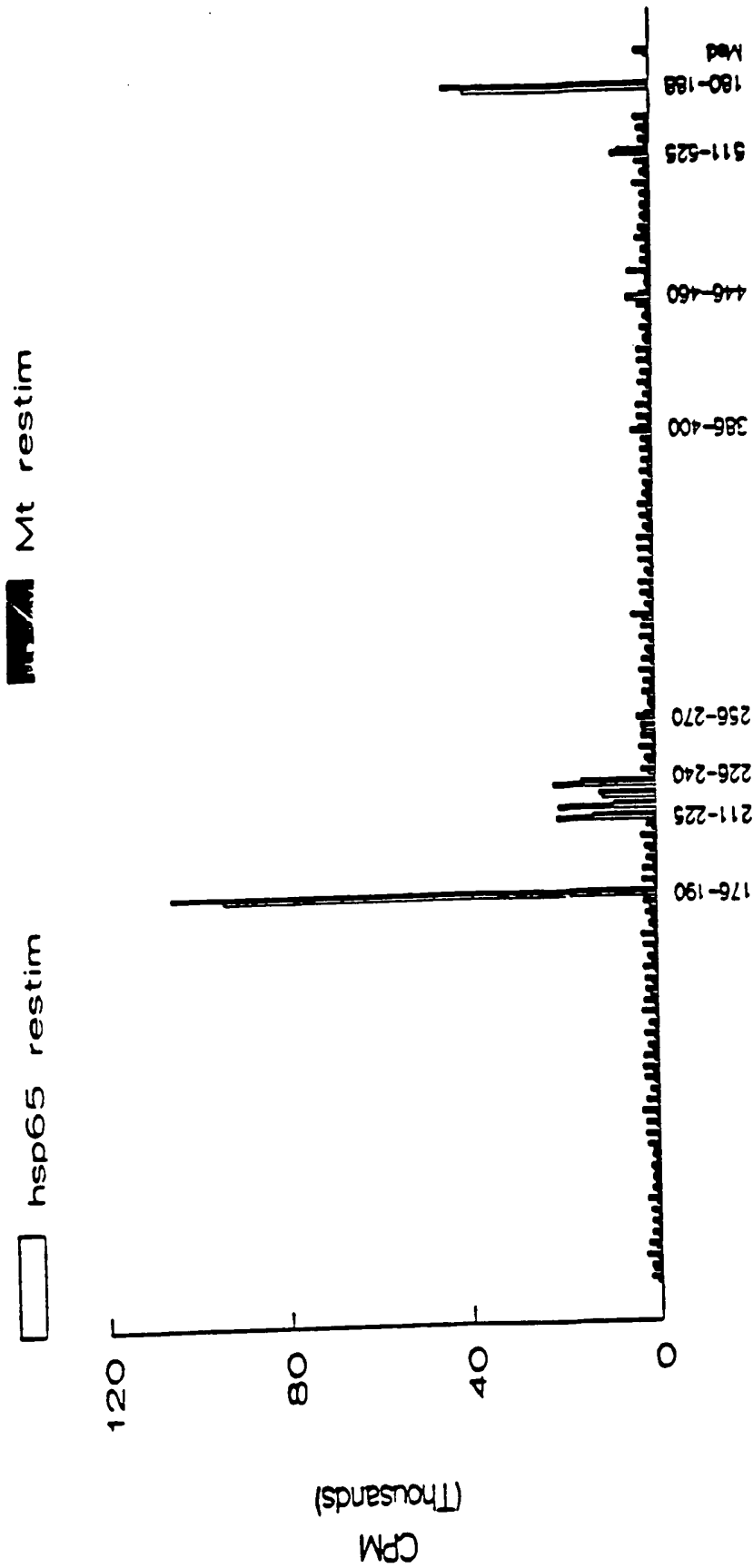
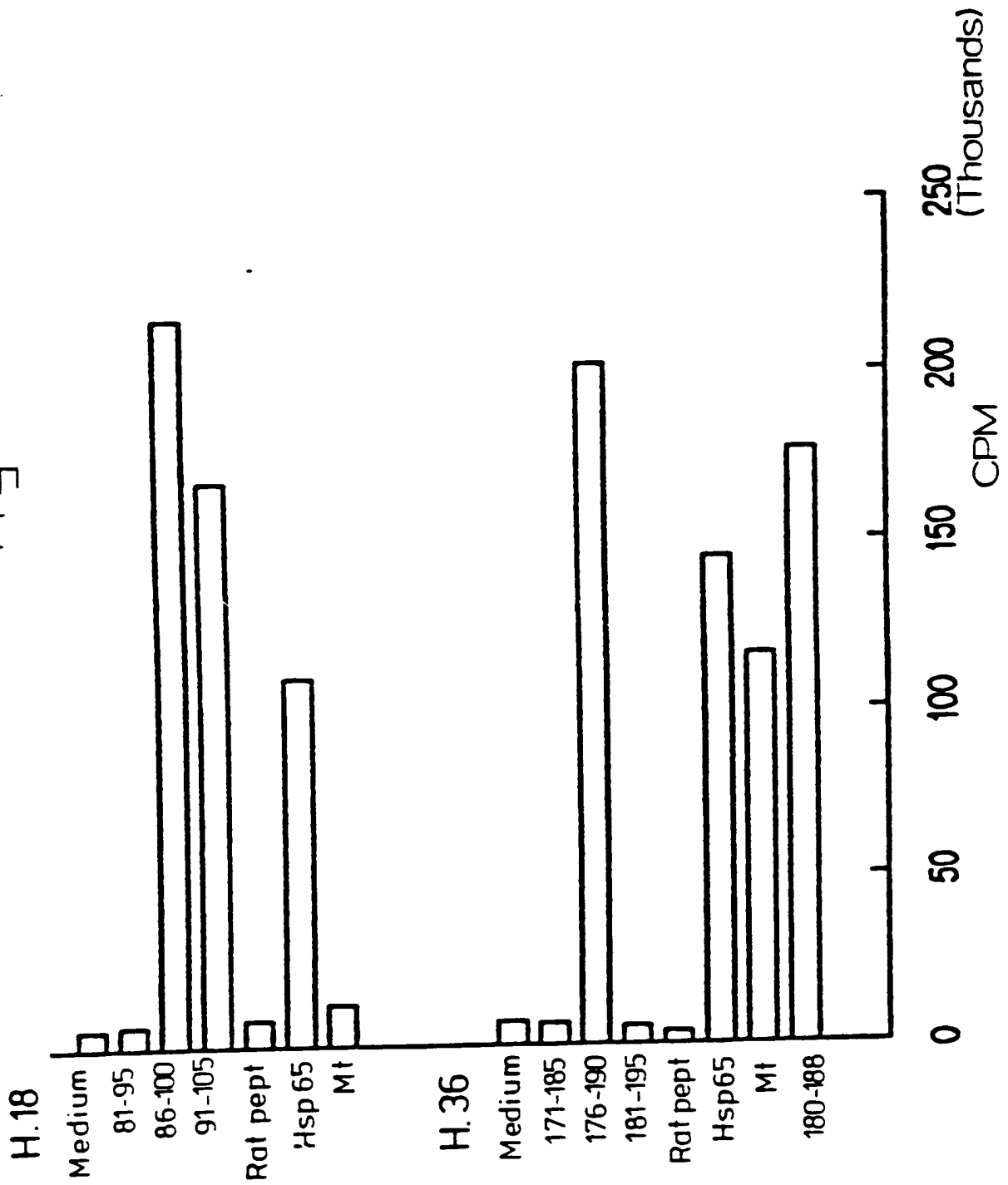


fig - 5.1



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fig - 5.2

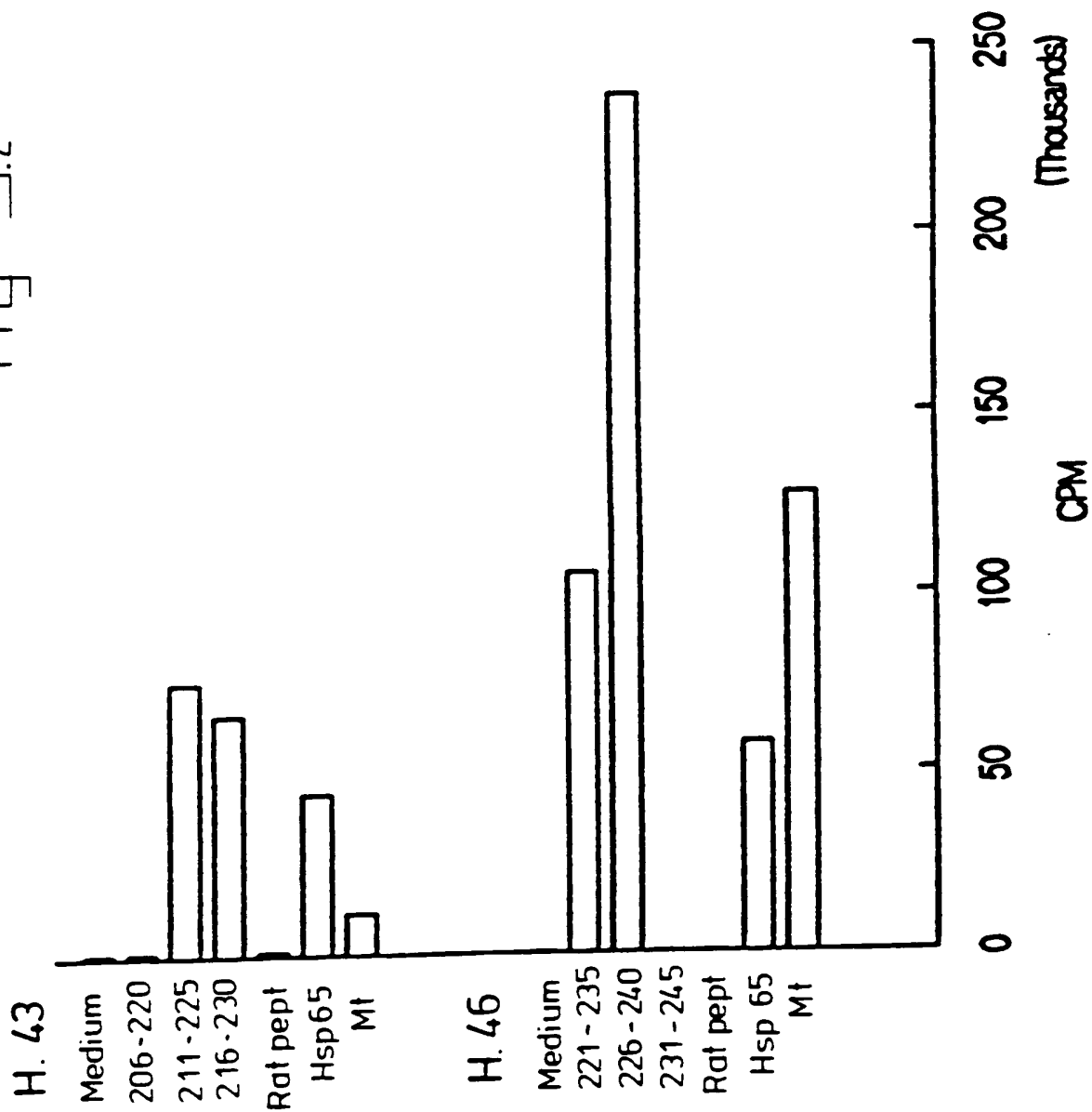


fig - 5.3

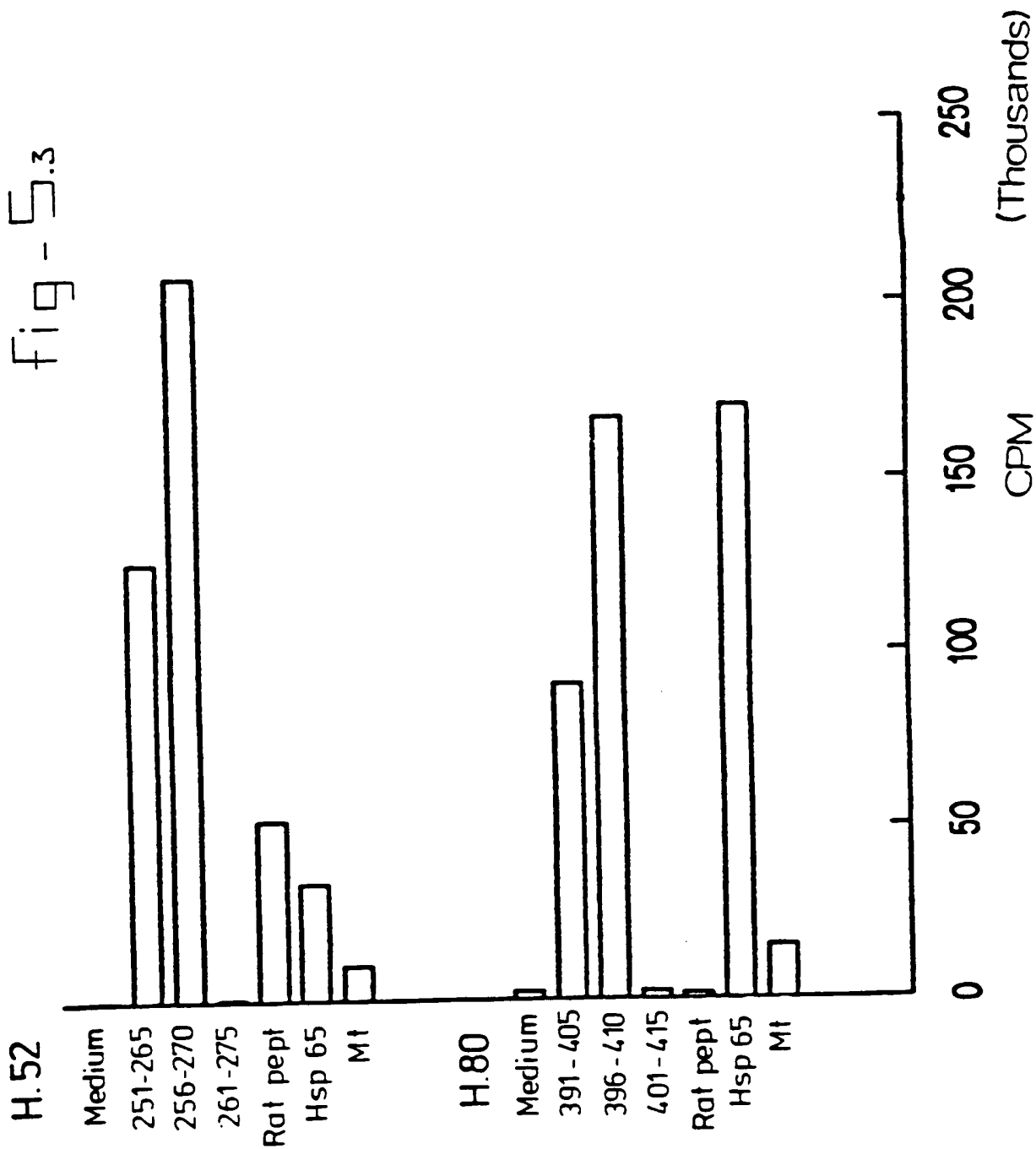
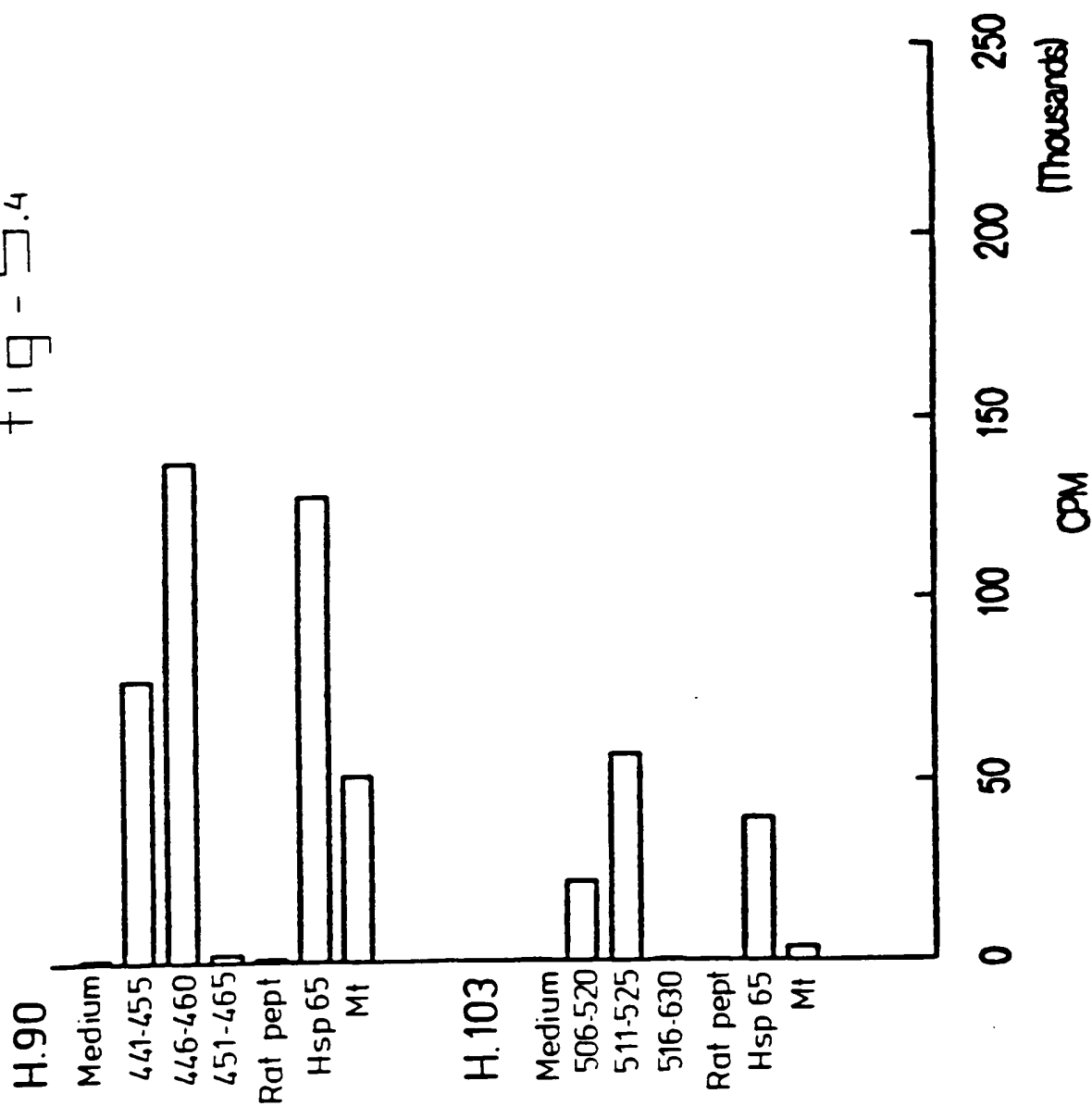


fig - 5.4



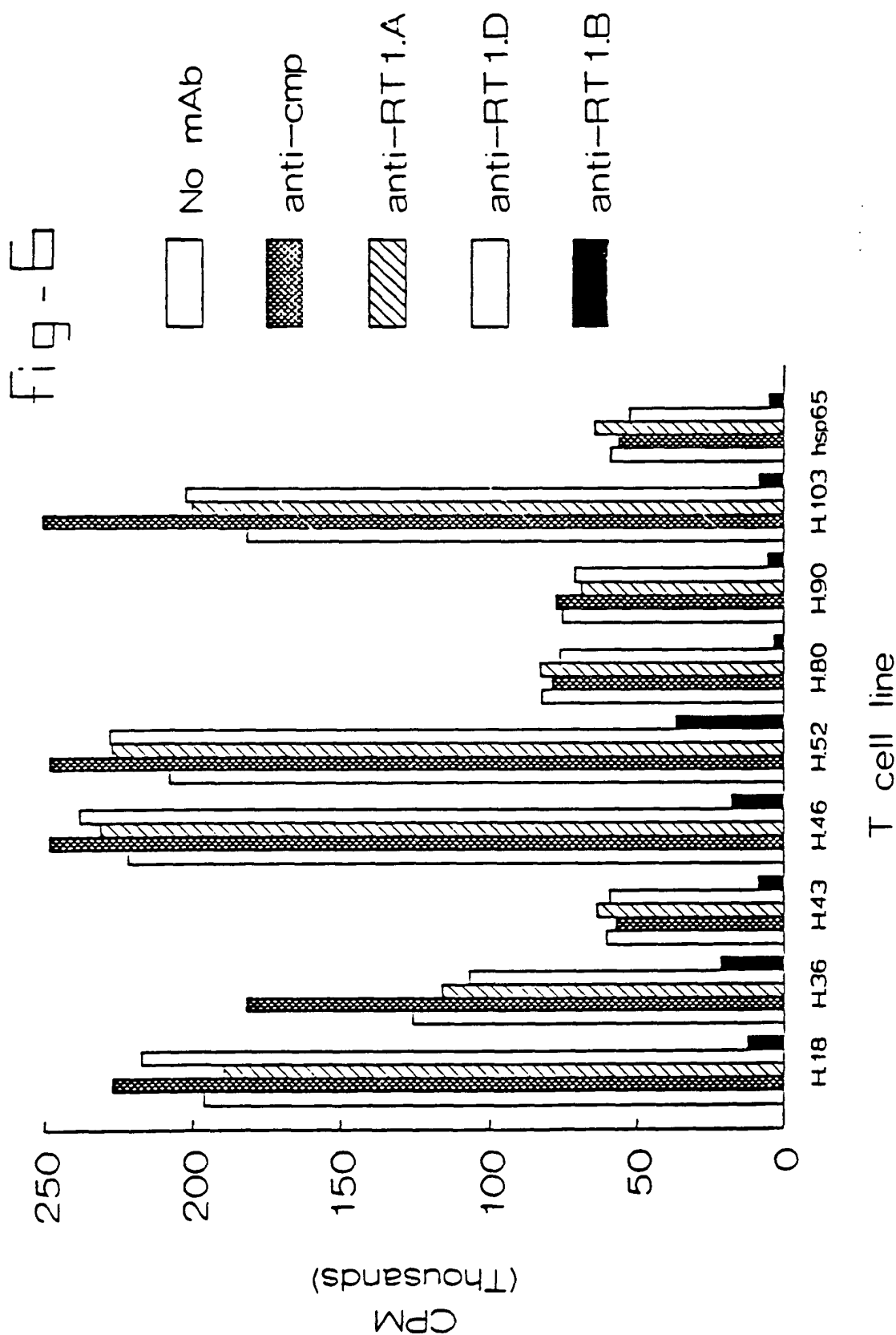


fig - 7.1 176-190

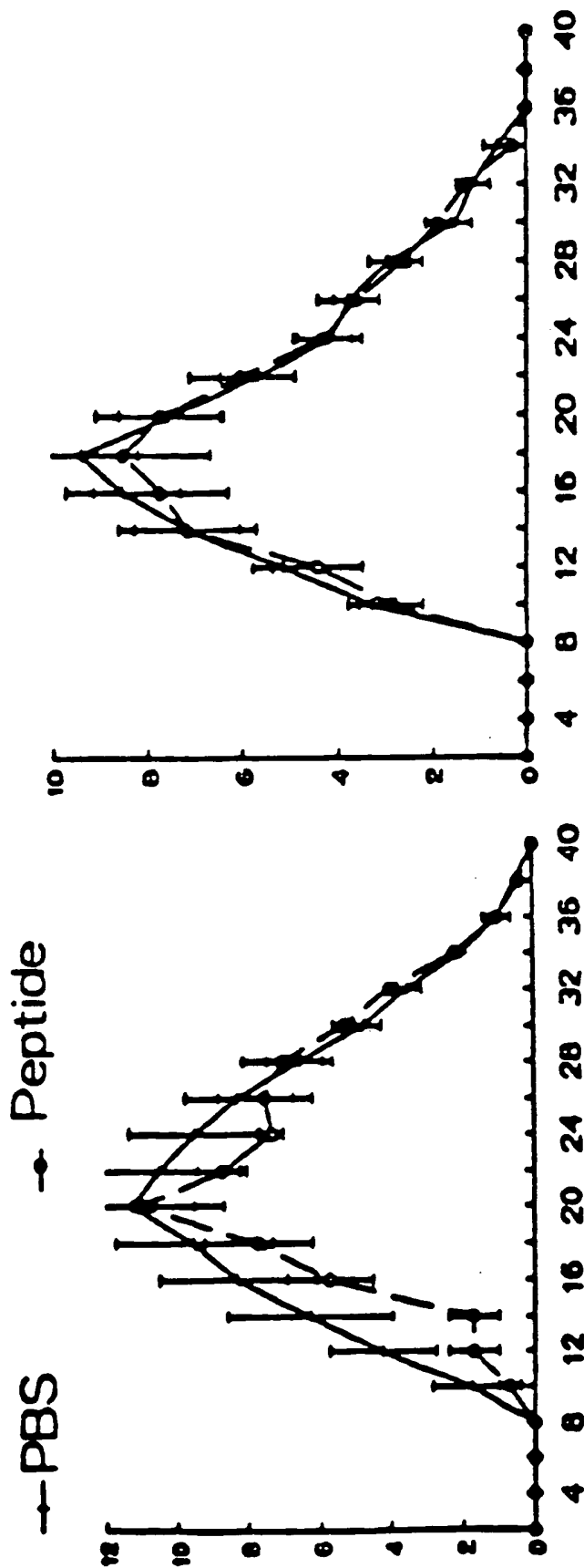


fig - 7.2
211-225 226-240

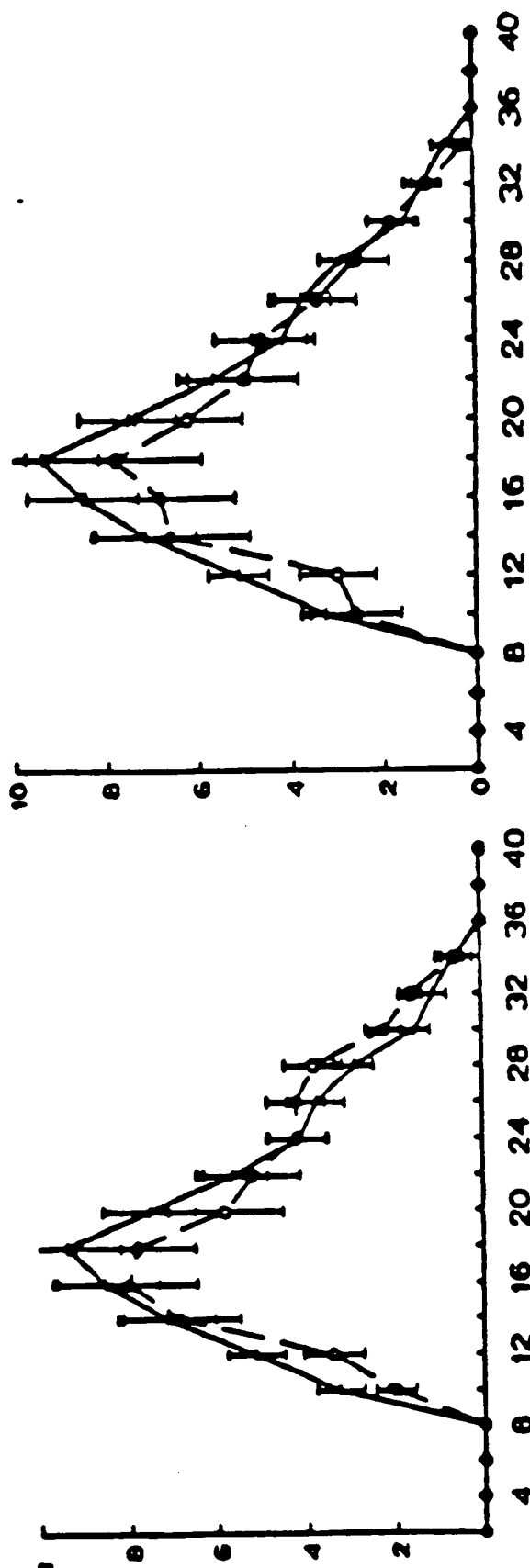
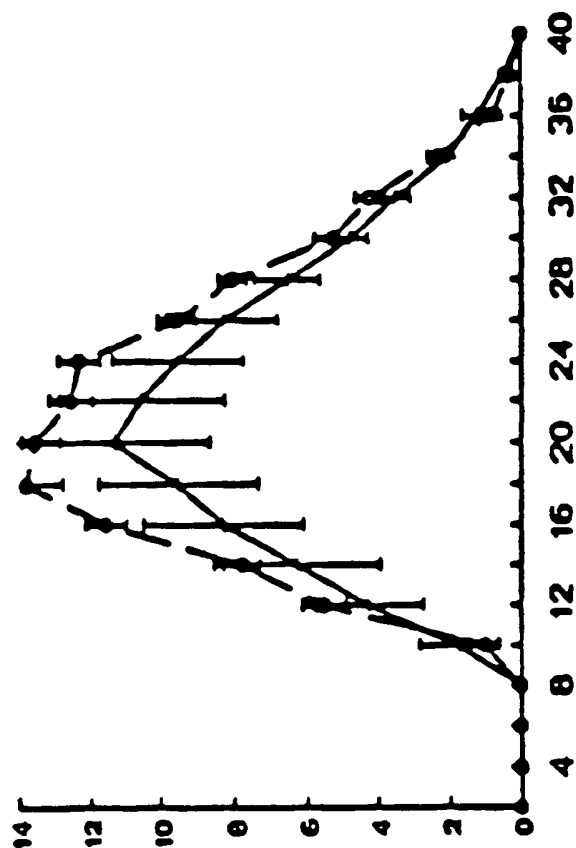


fig - 7.3

396-410



256-270

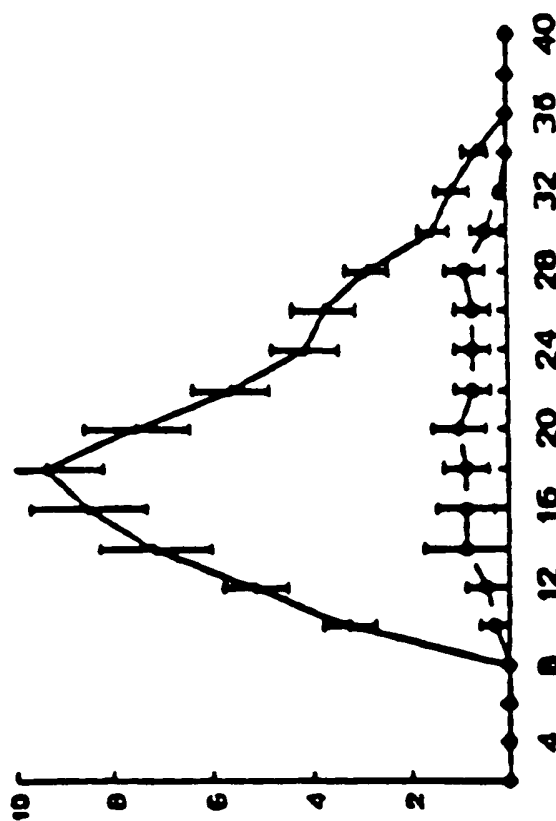
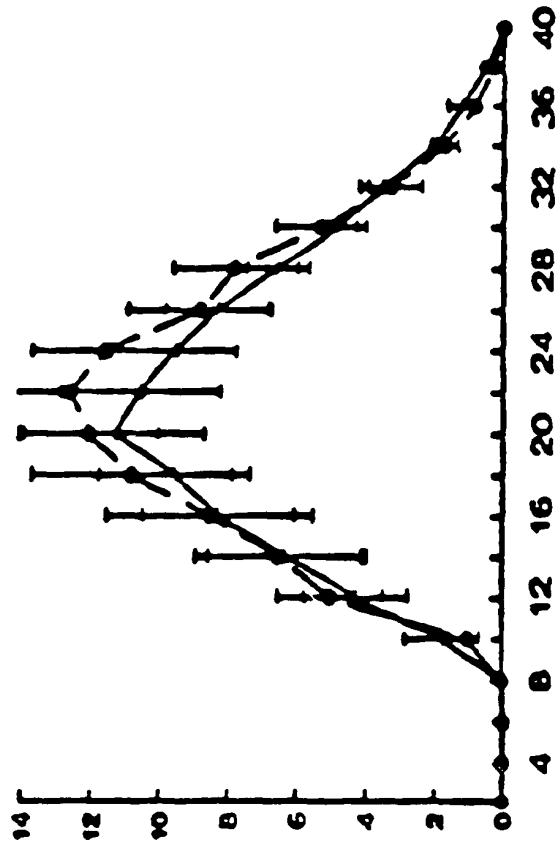


fig-7.4
511-525



446-460

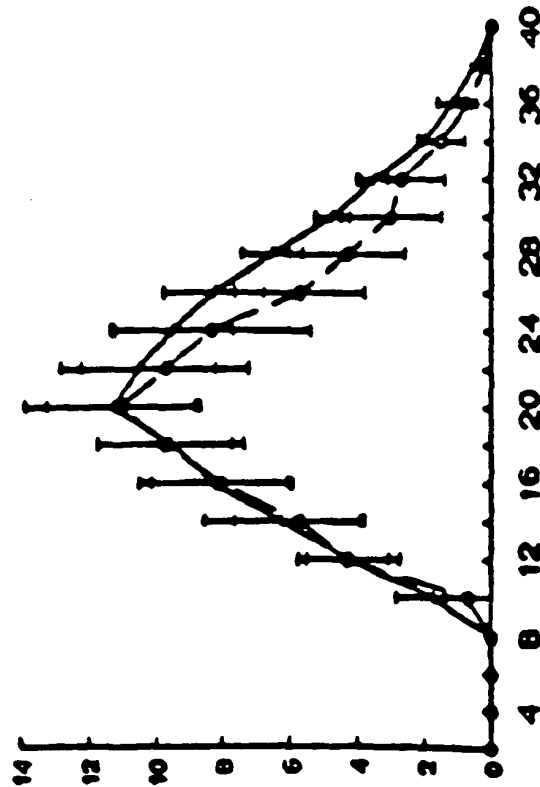


Fig - 1

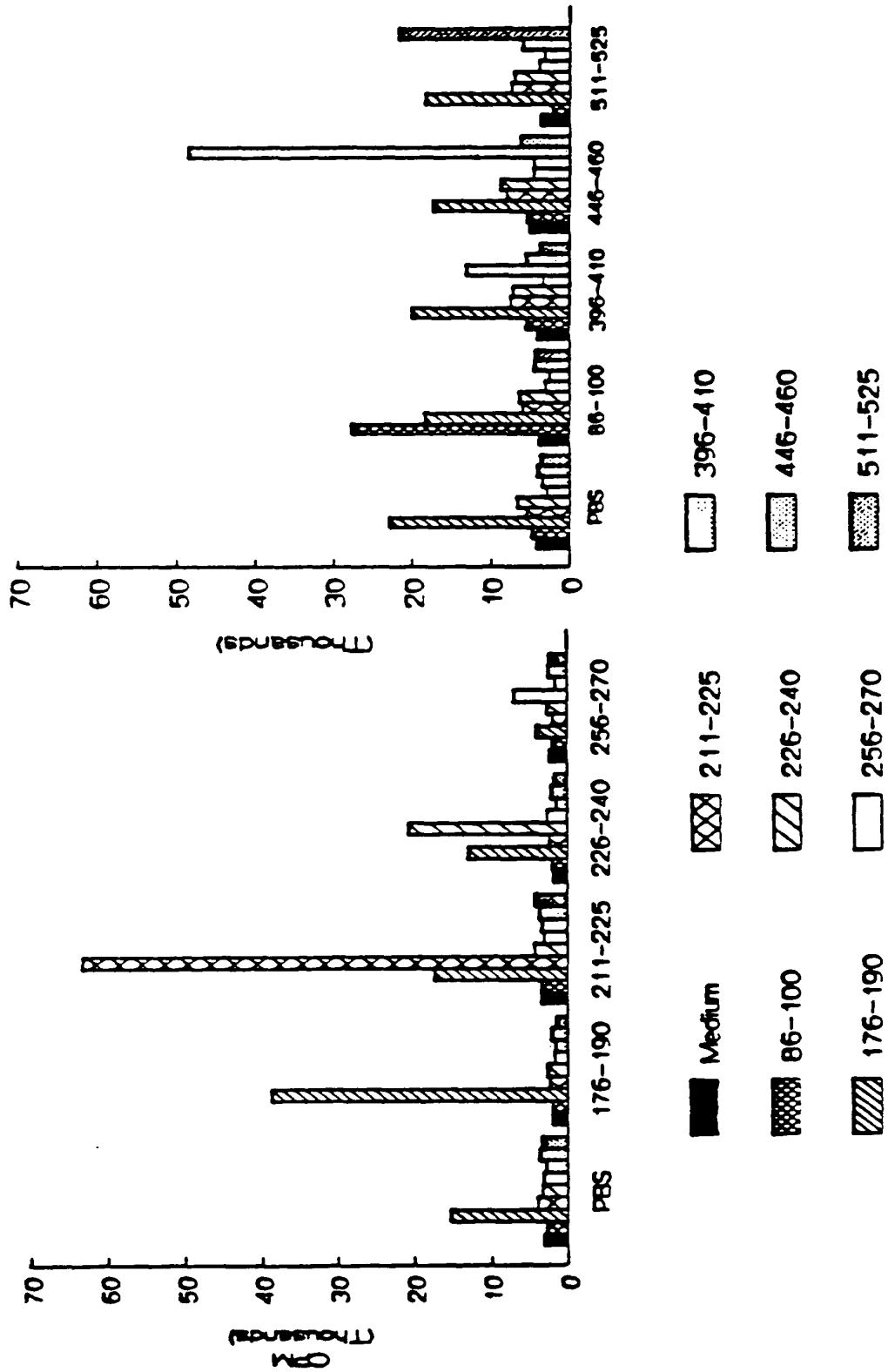


fig-9

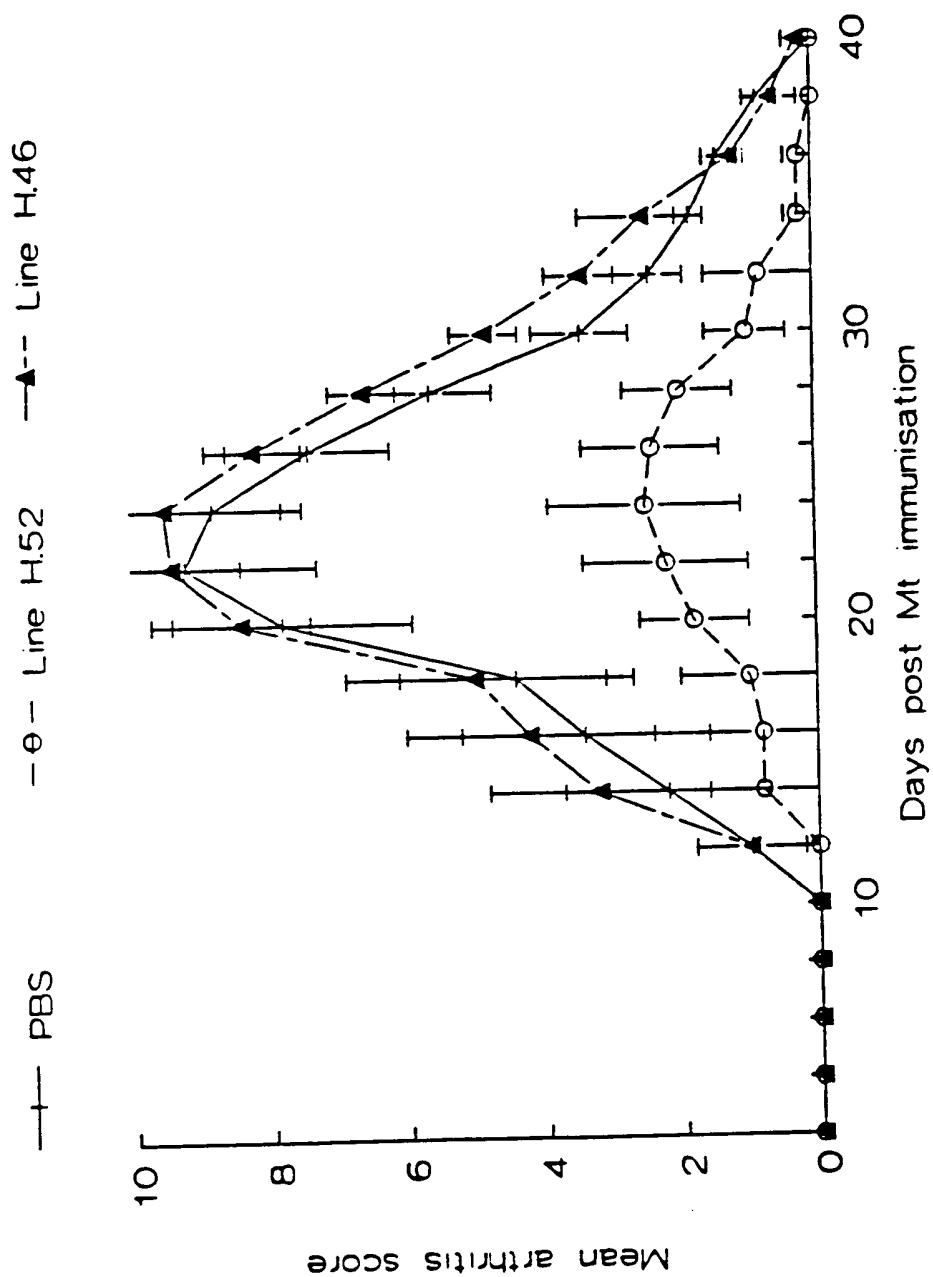


fig-10

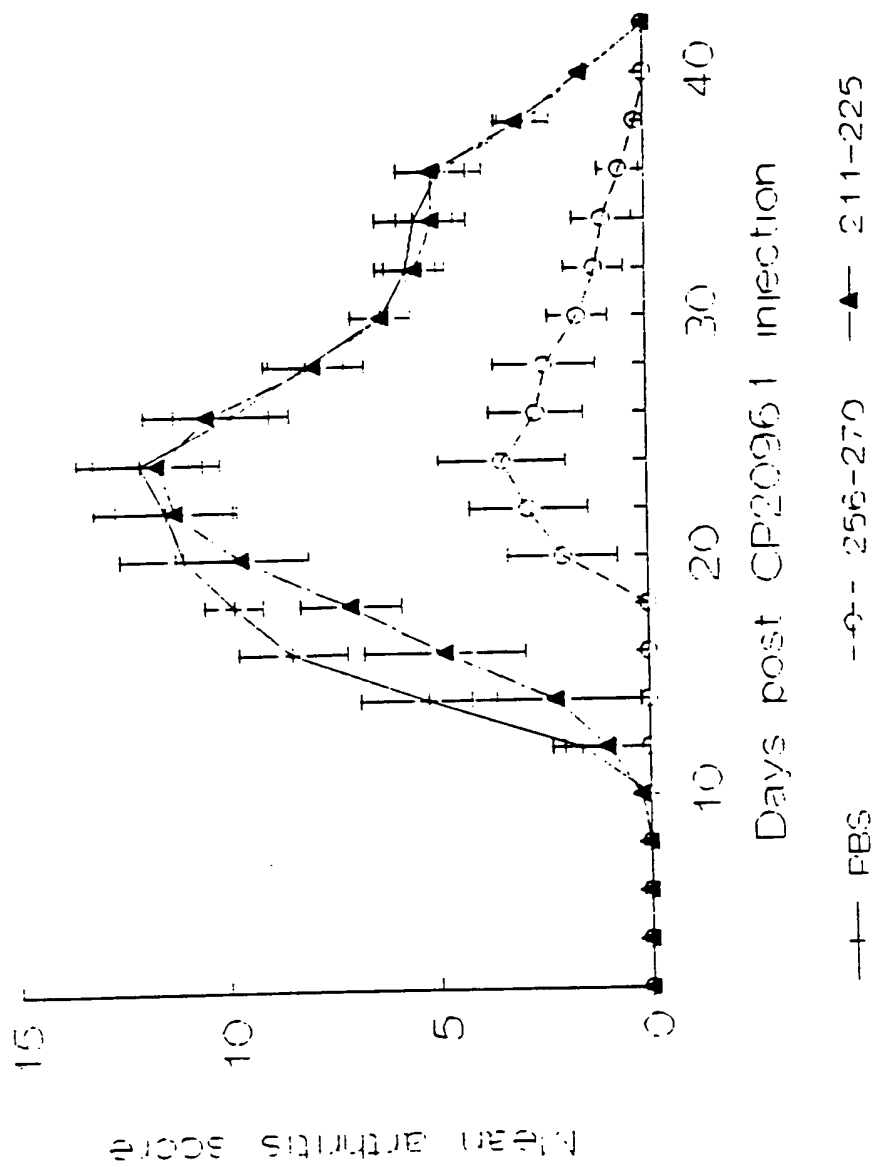


fig-11

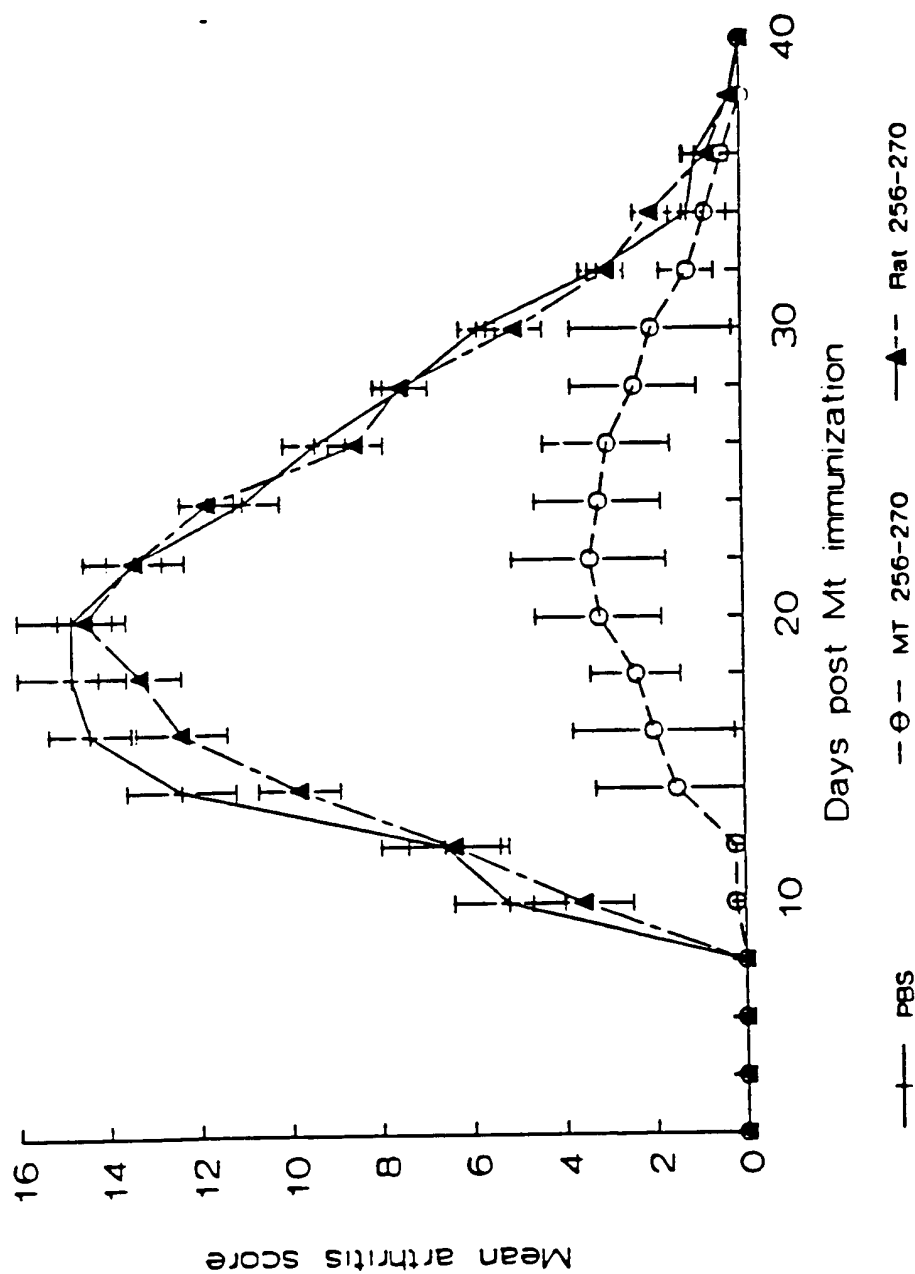


fig - 12

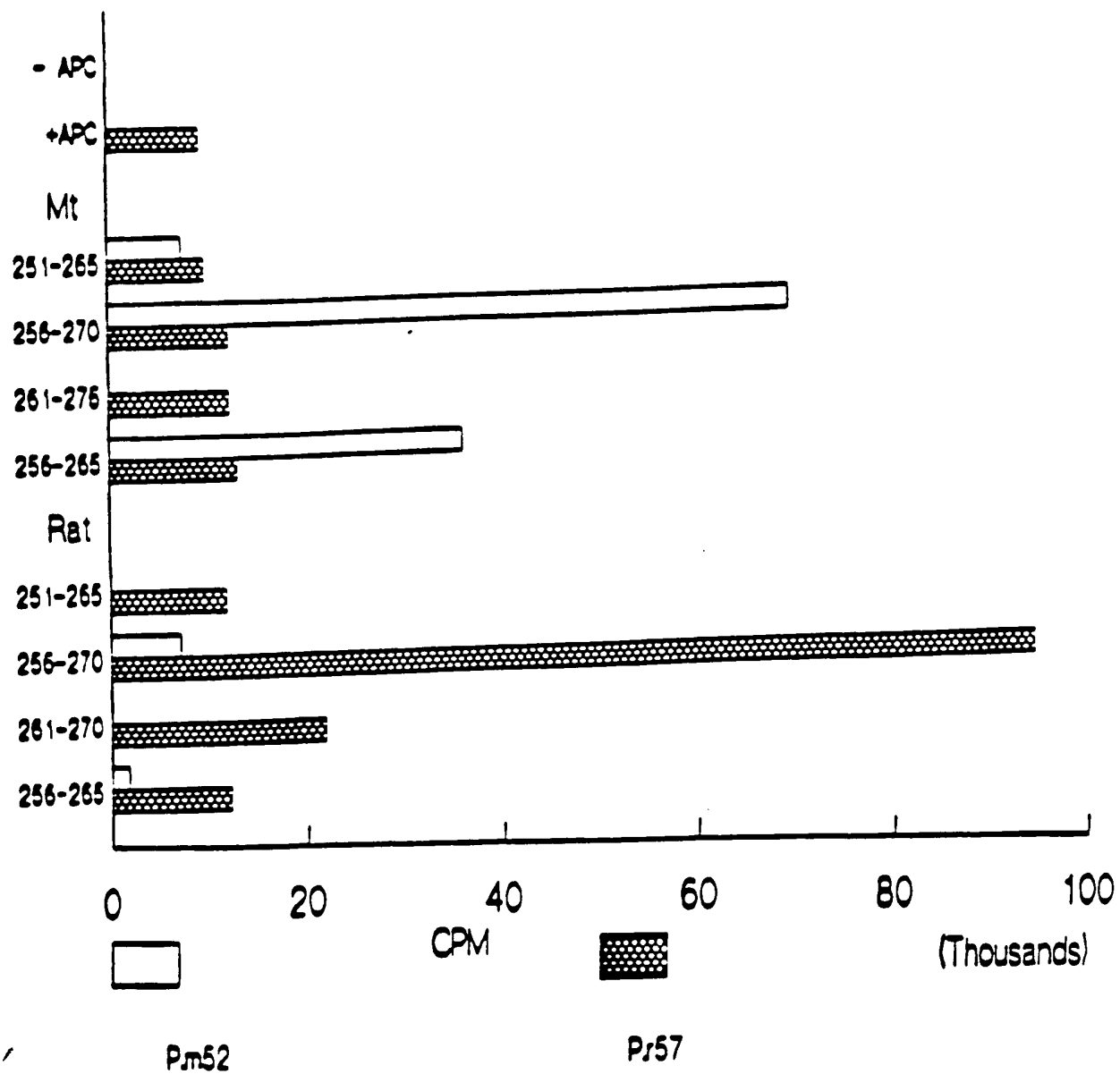


Fig. 13 (1)

 * MULTIPLE SEQUENCE ALIGNMENT HSP60 *

HUMAN	MLRLPTVFRQMRPVSRVLAPHLTRAYAKDVKF	32
RAT	-----A-----KDVKF	6
MOUSE	-----APHLTRAYAKDVKF	14
M. TUB	M-----AKTIAY	7
	*..	
HUMAN	GADARALMLQGVDLLADAVAVTMGPKGRTVII	64
RAT	GADARALMLQGVDLLADAVAVTMGPKGRTVII	38
MOUSE	GADARALMLQGVDLLADAVAVTMGPKGRTVII	46
M. TUB	DEEARGLERGLNALADAVKVTLGPKGRNVVL	39
	...* . . * . . ***** * *	
HUMAN	EQSWGSPKVTKDGVTVAKSIDLKDKYKNIGAK	96
RAT	EQSWGSPKVTKDGVTVAKSIDLKDKYKNIGAK	70
MOUSE	EQSWGSPKVTKDGVTVAKSIDLKDKYKNIGAK	78
M. TUB	EKKWGAPTITNDGVSIAKEIELEDPEYKIGAE	71
	* . . * . . * * *	
HUMAN	LVQDVANNTNEEAGDGT TTTATV LARSIAKEGF	128
RAT	LVQDVANNTNEEAGDGT TTTATV LARSIAKEGF	102
MOUSE	LVQDVANNTNEEAGDGT TTTATV LARSIAKEGF	110
M. TUB	LVKEVAKKTDDVAGDGT TTTATV LAQALVREGL	103
	* . . * . . * . . ***** * *	
HUMAN	EKISKGANPVEIRRGVMLAVDAVIAELKKQSK	160
RAT	EKISKGANPVEIRRGVMLAVDAVIAELKKQSK	134
MOUSE	EKISKGANPVEIRRGVMLAVDAVIAELKKQSK	142
M. TUB	RNVAAGANPLGLKRGIEKAVEKVTETLLKGAK	135
	... ***** * . . * . . * . . *	
HUMAN	PVTTPEEIAQVATISANGDKEIGNIISDAMKK	192
RAT	PVTTPEEIAQVATISANGDKDIGNIISDAMKK	166
MOUSE	PVTTPEEIAQVATISANGDKDIGNIISDAMKK	174
M. TUB	EVETKEQIAATAAISA-GDQSIGDLIAEAMDK	166
	* . * * . . * * *	
HUMAN	VGRKGVITVKDGKTLNDELEIIIEGMKFDRGYI	224
RAT	VGRKGVITVKDGKTLNDELEIIIEGMKFDRGYI	198
MOUSE	VGRKGVITVKDGKTLNDELEIIIEGMKFDRGYI	206
M. TUB	VGNEGVI TVEESNTFGLQLEL TEGMRFDKGYI	198
	* . . ***** * . . * . . ***** * . . *	
HUMAN	SPYFINTSKGQKCEFQDAYVLLSEKKISSIQS	256
RAT	SPYFINTSKGQKCEFQDAYVLLSEKKISSVQS	230
MOUSE	SPYFINTSKGQKCEFQDAYVLLSEKKFSSVQS	238
M. TUB	SGYFVTDPERQEAVLEDPYILLVSSKVSTVKD	230
	* * * . . * . . * . . *	
HUMAN	IVPALEIANAHRKPLVIIAEDVDGEALSTLV	288
RAT	IVPALEIANAHRKPLVIIAEDVDGEALSTLV	262
MOUSE	IVPALEIANAHRKPLVIIAEDVDGEALSTLV	270
M. TUB	LLPLLEKVI GAGKPLIIAEDVEGEALSTLV	262
	..* * . . ***** * *	

Fig. 13 (2)

HUMAN	NRLKVGLOVVAVKAPGFGDNRKNQLKDMAIAT	320
RAT	NRLKVGLOVVAVKAPGFGDNRKNQLKDMAIAT	294
MOUSE	NRLKVGLOVVAVKAPGFGDNRKNQLKDMAIAT	302
M. TUB	NKIRGTFKSVAVKAPGFGDRRKAMLQDMAILT	294
	*... ..*****.***. *.***** *	
HUMAN	GGAVFGEEGLTLNLEDVQPHDLGKVGEVIVTK	352
RAT	GGAVFGEEGLNLNLEDVQAHDLGKVGEVIVTK	326
MOUSE	GGAVFGEEGLNLNLEDVQAHDLGKVGEVIVTK	334
M. TUB	GGQVISEE-VGLTLENADLSLLGKARKVVVTK	325
	.*...*. ...*.*... ..*. .*.***	
HUMAN	DDAMLLKGKGDKAQIEKRIQEIIIEQLDVTTSE	384
RAT	DDAMLLKGKGDKAHIEKRIQEITEQLDITTSE	358
MOUSE	DDAMLLKGKGDKAHIEKRIQEITEQLDITTSE	366
M. TUB	DETTIVEGAGDTDAIAGRVAQIRQEIENSDD	357
 **.. *. *...* **.	
HUMAN	YEKEKLNERLAKLSDGVAVLKVGGTSDVEVNE	416
RAT	YEKEKLNERLAKLSDGVAVLKVGGTSDVEVNE	390
MOUSE	YEKEKLNERLAKLSDGVAVLKVGGTSDVEVNE	398
M. TUB	YDREKLQERLAKLAGGVAVIKAGAATEVELKE	389
	*..***.*****..*****.*.*.....**..*	
HUMAN	KKDRVTDALNATRAAVEEGIVLGGGCALLRCI	448
RAT	KKDRVTDALNATRAAVEEGIVLGGGCALLRCI	422
MOUSE	KKDRVTDALNATRAAVEEGIVLGGGCALLRCI	430
M. TUB	RKHRIEDAVRNAKAAVEEGIVAGGGVTLLOAA	421
*.*.....***** ***. **.	
HUMAN	PALDSLTPANEDQKIGIEIIKRTLKIPAMTIA	480
RAT	PALDSLKPANEDQKIGIEIIKRALKIPAMTIA	454
MOUSE	PALDSLKPANEDQKIGIEIIKRALKIPAMTIA	462
M. TUB	PTLDELK-LEGDEATGANIVKVALEAPLKQIA	452
	*.***.*.*.*.*.*.*.*.*.*	
HUMAN	KNAGVEGSLIVEKIMQSSSEVGYDAMAGDFVN	512
RAT	KNAGVEGSLIVEKILQSSSEVGYDAMLGDFVN	486
MOUSE	KNAGVEGSLIVEKILQSSSEVGYDAMLGDFVN	494
M. TUB	FNSGLEPGVVAEKVRNLPAGHGLNAQTGVYED	484
	..*.**..*.*.*.*.*..	
HUMAN	MVEKGIIDPTKVVRTALLDAAGVASLLTTAEV	544
RAT	MVEKGIIDPTKVVRTALLDAAGVASLLTTAEA	518
MOUSE	MVEKGIIDPTKVVRTALLDAAGVASLLTTAEA	526
M. TUB	LLAAGVADPVKVTRSALQNAASIAGLFLTTEA	516
	... *. **.*.*.*.*.*.*.*.*.*.	
HUMAN	VVTEIPKEEKDPGMGAMGGMGGMGGGMF	573
RAT	VVTEIPKEEKDPGMGAMGGMGGMGGGMF	547
MOUSE	VVTEIPKEEKDPGMGAMGGMGGMGGGMF	555
M. TUB	VVADKPEKEKASVPG-----GGDMGGMDF	540
	..*.*...*.* ...*.*.*	

Consensus length: 573

Identity (*) : 254 (44.3%)

Similarity (.) : 211 (36.8%)

Glyceraldehyde-3-phosphate dehydrogenase sequences of
Bacillus stearothermophilus (upper sequence) and
Rattus norvegicus (Rat) (lower sequence).

+ Similar, not identical aminoacids: Bacillus / Rat (115)

				5						10				15		
Ala	Val	Lys	Val	Gly	Ile	Asn	Gly	Phe	Gly	Arg	Ile	Gly	Arg	Asn	Val	
***	***	***	***	***	+	***	***	***	***	***	***	***	***	***	***	
-	Val	Lys	Val	Gly	Val	Asn	Gly	Phe	Gly	Arg	Ile	Gly	Arg	Leu	Val	
					5					10					15	
				20					25					30		
Phe	Arg	Ala	Ala	Leu	Lys	Asn	Pro	Asp	Ile	Glu	Val	Val	Ala	Val	Asn	
***	***	***	***	+	+			+	+	+	+	***	***	+	***	
Thr	Arg	Ala	Ala	Phe	Ser	Cys	Asp	Lys	Val	Asp	Ile	Val	Ala	Ile	Asn	
				20					25					30		
				35					40					45		
Asp	-	Leu	Thr	Asp	Ala	Asn	Thr	Leu	Ala	His	Leu	Leu	Lys	Tyr	Asp	
***		+	+	***	+	***		+	+	+	+	+	+	***	***	
Asp	Pro	Phe	Ile	Asp	Leu	Asn	Tyr	Met	Val	Tyr	Met	Phe	Gln	Tyr	Asp	
			35					40					45			
			50					55					60			
Ser	Val	His	Gly	Arg	Leu	Asp	Ala	Glu	Val	Ser	Val	Asn	Gly	Asn	Asn	
***	+	***	***	+	+	+	+	+	***	+	+	+	+	+	+	
Ser	Thr	His	Gly	Lys	Phe	Asn	Gly	Thr	Val	Lys	Ala	Glu	Asn	Gly	Lys	
			50					55					60			
			65					70					75			
Leu	Val	Val	Asn	Gly	Lys	Glu	Ile	Ile	Val	Lys	Ala	Glu	Arg	Asp	Pro	
***	***	+	***	***	***		***	+	+		+	***	***	***	***	
Leu	Val	Ile	Asn	Gly	Lys	Pro	Ile	Thr	Ile	Phe	Gln	Glu	Arg	Asp	Pro	
			65				70					75				
			80				85					90				95
Glu	Asn	Leu	Ala	Trp	Gly	Glu	Ile	Gly	Val	Asp	Ile	Val	Val	Glu	Ser	
	+	+		***	***	+		***	+	+		***	***	***	***	
Val	Lys	Ile	Lys	Trp	Gly	Asp	Ala	Gly	Ala	Glu	Tyr	Val	Val	Glu	Ser	
					85					90					95	
				100					105						110	
Thr	Gly	Arg	Phe	Thr	Lys	Arg	Glu	Asp	Ala	Ala	Lys	His	Leu	Glu	Ala	
***	***		***	***	+	+	***	+	***	+		***	***	+	+	
Thr	Gly	Val	Phe	Thr	Thr	Met	Glu	Lys	Ala	Gly	Ala	His	Leu	Lys	Gly	
				100					105					110		

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Fig. 14 (2)

										115							120							125								
Gly	Ala	Lys	Lys	Val	Ile	Ile	Ser	Ala	Pro	Ala	Lys	Asn	Glu	Asp	Ile																	
***	***	***	+	***	***	***	***	***	***	+		+			+																	
Gly	Ala	Lys	Arg	Val	Ile	Ile	Ser	Ala	Pro	Ser	Ala	Asp	Ala	Pro	Met																	
										115							120							125								
																130							135							140		
Thr	Ile	Val	Met	Gly	Val	Asn	Gln	Asp	Lys	Tyr	Asp	Pro	Lys	Ala	His																	
	+	***	***	***	***	***	+	+	***	***	***		+	+																		
-	Phe	Val	Met	Gly	Val	Asn	His	Glu	Lys	Tyr	Asp	-	Asn	Ser	Leu																	
										130							135							140								
																145							150							155		
His	Val	Ile	Ser	Asn	Ala	Ser	Cys	Thr	Thr	Asn	Cys	Leu	Ala	Pro	Phe																	
+	+	+	***	***	***	***	***	***	***	***	***	***	***	***	+																	
Lys	Ile	Val	Ser	Asn	Ala	Ser	Cys	Thr	Thr	Asn	Cys	Leu	Ala	Pro	Leu																	
										145							150							155								
																160							165							170		
Ala	Lys	Val	Leu	His	Glu	Gln	Phe	Gly	Ile	Val	Arg	Gly	Met	Met	Thr																	
***	***	***	+	***	+	+	***	***	***	***	***	***	+	***	***																	
Ala	Lys	Val	Ile	His	Asp	Asn	Phe	Gly	Ile	Val	Glu	Gly	Leu	Met	Thr																	
										160							165							170								
																180							185							190		
Thr	Val	His	Ser	Tyr	Thr	Asn	Asp	Gln	Arg	Ile	Leu	Asp	Leu	Pro	His																	
***	***	***	+		***	+	+	***	+	+	+	***		***	***																	
Thr	Val	His	Ala	Ile	Thr	Ala	Thr	Gln	Lys	Thr	Val	Asp	Gly	Pro	Ser																	
										175							180							185								
																195							200							205		
Lys	Asp	Leu	Arg	Arg	-	Ala	Arg	Ala	Ala	Ala	Glu	Ser	Ile	Ile	Pro																	
	+	***	+	***		+	***	+	***	***	+	+	***	***	***																	
Gly	Lys	Leu	Trp	Arg	Asp	Gly	Arg	Gly	Ala	Ala	Gln	Asn	Ile	Ile	Pro																	
										190							195							200								
																210							215							220		
Thr	Thr	Thr	Gly	Ala	Ala	Lys	Ala	Val	Ala	Leu	Val	Leu	Pro	Glu	Leu																	
+	+	***	***	***	***	***	***	***	***	+	***	+	***	***	***																	
Ala	Ser	Thr	Gly	Ala	Ala	Lys	Ala	Val	Gly	Lys	Val	Ile	Pro	Glu	Leu																	
										210							215							220								
																225							230							235		
Lys	Gly	Lys	Leu	Asn	Gly	Met	Ala	Met	Arg	Val	Pro	Thr	Pro	Asn	Val																	
+	***	***	***	+	***	***	***	+	***	***	***	***	***	***	***																	
Asn	Gly	Lys	Leu	Thr	Gly	Met	Ala	Phe	Arg	Val	Pro	Thr	Pro	Asn	Val																	
										225							230							235								
																240							245							250		
Ser	Val	Val	Asp	Leu	Val	Ala	Glu	Leu	Glu	Lys	Glu	Val	Thr	Val	Glu																	
***	***	***	***	***	+		***	***	***	***		+	+		+																	
Ser	Val	Val	Asp	Leu	Thr	Cys	Arg	Leu	Glu	Lys	Pro	Ala	Lys	Tyr	Asp																	
										240							245							250								

